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ABSTRACT

School administrators suffer greater stress from administrative constraints than from any other stress factors, according to a survey of over 1,150 Oregon elementary and secondary principals and vice-principals, superintendents, and central office administrators. Researchers isolated 35 stressors, or stress-inducing situations, that could be grouped into 5 categories of 7 stressors each: administrative constraints, administrative responsibilities, interpersonal relations, intrapersonal conflict, and role expectations. Of the ten stressors perceived as most bothersome, five were from the administrative constraints category. Rank-order analysis revealed that administrators at all levels share many common stressors, though the specific values assigned the stressors by those at different levels may be quite divergent. Higher levels of stress were also consistently associated with reports of poor health, regardless of the stressor involved. The most important elements common to major stressors were identified as the management of time in time-consuming activities, the need to comply with rules and policies, and the maintenance of interpersonal relations. (Author/PGD)

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MANAGEMENT TEAM STRESSORS AND THEIR IMPACT ON ADMINISTRATORS' HEALTH

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MANAGEMENT TEAM STRESSORS

AND THEIR IMPACT ON ADMINISTRATORS' HEALTH

Research conducted during recent years has produced a growing body of evidence that occupational stress affects both the health and performance of managers (Cooper and Marshall, 1976; Gmelch, 1977; Howard, et al, 1978). The public even acknowledges that school leaders are involved in one of the most stressful jobs in society (NASSP, 1981).

Within the educational management ranks, superintendents are popularly identified as those individuals most susceptible to stress. This exclusive assumption, however, remains open for question. Certainly other levels of management are exposed to comparable pressures. Some evidence exists, for instance, that coronary heart disease is more common among middle managers than executives.

Whether the superintendent or the principal in the middle suffers the most is not the point of debate here, rather the sources of excessive administrative stress. Researchers and writers have amassed an overwhelming amount of information about stress: over 100,000 articles and books written about stress, 1,000 research projects conducted, and every year 6,000 more publications become catalogued under the heading of stress. The word stress is one with which the layman and professional alike is familiar. For all the attention stress receives, both in publications and personal experiences, at times our awareness of what stresses us remains undiscovered. Researchers know more about "the motives, habits, and most intimate arcania of the primitive peoples of New Guinea or elsewhere than (they) do of the denizens of the executive suites" (Mintzberg, 1973, p. 7). We know stress exists but are not insightful or patient enough to identify its sources.

This study attempted to bring about a greater awareness and visibility of this common managerial menace. Since it is helpful to establish a broad perspective and clear understanding from which to view stress; such a perspective is provided by the four-stage stress cycle portrayed in Figure 1. This cycle depicts the sequence of events postulated by Kahn (1970) as a stress process. His paradigm, as adapted by Gmelch (1982) has four stages, beginning with a set of factors in the objective environment which cause a demand on the individual (Stage I). The second stage represents the reception of the demand by the individual. This leads to the immediate reaction or response (Stage III), represented by psychological, physiological or behavioral changes. The fourth stage, called consequences (Stage IV), is differentiated from immediate responses. It involves longer-range effects, i.e., the changes beyond the immediate reactor such as disability or illness.

The purpose of this study was to identify the perceptions school administrators have concerning the sources of their occupational stress. To fulfill this major purpose three questions were examined:

1. What is the school administrator's perception of the major sources of stress in his/her job?
2. Are perceptions of the sources of the stress different among the various administrative positions in public education?
3. What relationship exists between school administrators' perceptions of sources of stress and their current physical health?

Since confusion exists in the literature and in common usage of the word stress and its related terms, the following definitions clarify the key concepts used in this study.

S T R E S S C Y C L E*

(Figure 1)

STAGE I	STAGE II	STAGE III	STAGE IV
Demands/Stressors →	Individual Perception →	Stress Response →	Consequences
• Meetings		• Psychological	
• Self-Expectations		• Psysiological	
• Interruptions		• Behavioral	
• Rules, Regulations			
• Heavy Work Load			
• Conflicts			

*Adopted from W.H. Gmelch, Improve Management By Removing Stress. San Jose, California: Lansford Publishing Company, 1980.

Stressors. As defined in terms of the stress cycle previously outlined stressors represent situations in which individuals "anticipate their inability to respond adequately to a perceived demand accompanied by one's anticipation of negative consequences for an inadequate response" (Gmelch, 1982, p. 160). Stage 1 represents the demands, Stage II the perception, Stage III the responses, and Stage IV the consequences. The key component of this definition will be that which is perceived to be stressful. As Wolff (1953, p. 133) states, "the stress accruing from a situation is based in large part on the way the affected subject perceives it."

Stress Factors. Clear categories of occupational stressors have not been established in the literature. A plethora of analytically independent sources of occupational stress exists which implies its multidimensionality. Cooper and Marshall's (1976) five categorical divisions have been modified in this study to more clearly delineate and describe the factors of stress as follows: (1) administrative constraints (related to inadequate time, meetings, rules) (2) administrative responsibilities (related to the characteristic managerial tasks of evaluation, negotiation, supervision); (3) interpersonal relations (related to resolving differences among and between clients, colleagues, supervisors); (4) intrapersonal conflict (centered around conflicts between one's performance and one's internal beliefs and expectations); and (5) role expectations (caused by a difference in expectations of self and the various publics served).

METHODOLOGY

Research Design

The design of this study was exploratory in nature and can best be described as an action research in the context of a field study. The researcher in a field study looks at a social or institutional situation and then investigates the relations among the attitudes, values, perceptions and behaviors of individuals and groups in the situation. Extraneous independent variables are controlled to a higher degree. Research authorities explain an exploratory field study has three purposes: (a) to discover scientific variables in the field situation; (b) to discover relations among variables (Katz, 1953); and (c) to lay groundwork for later, more systematic and vigorous testing of hypotheses (Kerlinger, 1973). This study purports to fulfill these ends with respect to sources of administrative stress.

Sample

The participants were members of the Confederation of Oregon School Administrators. The sample selection represents approximately 1,855 administrators. This large sample was used in order to obtain an accurate and thorough representation of the population.

Of the 1,855 questionnaires mailed 1,211 were returned for analysis. Since only full-time administrators were used in the analysis, 49 less-than-full-time respondents were declared invalid and six other questionnaires, 354 were elementary administrators, 397 were junior high and high school administrators, 151 were superintendent or superintendent/principals, 254 were assistant superintendents and central office staff, and 89 were

classified as "others". "Others" included curriculum directors, transportation supervisors and athletic directors.

The average administrator was 42 years old, had 9 years of administrative experience and 91 percent were male. The median hours worked per subject was 55 and the median percent of total life stress attributed to work was 75 percent.

Instrument Development

The questionnaire developed to measure sources of administrative stress evolved through a series of iterations designed to insure that all relevant facets of job-related stress were explored. The fifteen-item index of Job-Related Strain (Indik, Seashore and Slesinger, 1964) comprised the initial questionniare core. This index was supplemented by items suggested from a review of current publications for public school administrators, and by items suggested from stress logs which were kept by forty school administrators for a period of one week. Those participating in this initial phase of item development were asked by researchers to keep a diary of work-related stress. On a daily basis they reported: (1) the most stressful single incident occurring that day; and, (2) the most stressful series of related incidents (e.g., recurring telephone interruptions, pending grievances, parent-teacher conflicts, etc.). At the end of the week they were asked to identify other sources of stress that might not have occurred during the week in which stress logs were kept.

The 23 items developed from stress logs and reviews of current public school administrator publications appeared to tap sources of stress which are unique to administrative roles in general, and the roles of public school administrators in particular. Thus, it was hoped that the

Administrative Stress Index (ASI) would permit a more comprehensive assessment of stress in this particular population than would be permitted by the use of generic instruments such as the Job-Related Strain index.

The stressors were then categorized into five factors with seven items in each. The five factors were: (a) administrative constraints, (b) administrative responsibilities, (c) interpersonal relations, (d) intrapersonal conflict, and (e) role expectations. After categorization the stressors were written in the form of questions capable of summation on a five-point Likert-type scale. They were placed in a pilot questionnaire and field tested for validity and clarity on a group of 25 practicing administrators. After the initial testing, the questionnaire was revised and tested on a second group of 20 administrators.

Analysis Method

First, mean scores for each of the 35 stressors and five stress factors were computed. Not Applicable (NA) scores were disregarded and not included in the total number. Analysis of variance was then used to test for significant differences between stress factors and stressors when compared by administrative position and current health status. Post hoc analysis using the Scheffe test for multiple comparisons was performed on those groups having significant differences. It is important to recognize the conservatism of this test decreases the sensitivity to detecting the real differences between groups, thus increasing the chance of rejecting differences when they may exist (Keppel, 1973).

RESULTS

Stress Factors and Stressors

The means and standard deviations of the five stress factors are represented in Table 1. The category of "Administrative Constraints" was perceived to be most stressful with a mean score of 2.78, and had the greatest variance with a standard deviation of .72. The other four factors were closely grouped, ranging from a mean score of 2.45 for "administrative responsibility" to 2.10 for "role expectation". "Intrapersonal conflict" had the least variance with a standard deviation of .62 while the other three factors ("administrative responsibility," "interpersonal relations," and "role expectations") had similar variances with only .01 difference on their standard deviations (.66, .67, and .66 respectively).

Each of the five factors represented a composite of seven stressors; totally 35 individual stressors. The means and standard deviations of each stressor is reported in Table 2. They ranged from a high of 3.34 on "complying with rules and policies" to a low of 1.43 on "feeling not enough is expected of me by my supervisor." Generally, those stressors perceived to be most stressful had the greatest variance, thus indicating more divergency in the responses on the high stressors.

Stress and Administrative Position

The means and analysis of variance of stress factors by levels of administrative positions presented in Table 3 provide additional insight into what stresses different groups of administrators. Significant differences were found among administrative positions from all factors except "role expectations." Post hoc analysis of the "administrative

Table 1

Means and Standard Deviations of

Administrative Stress Factors

Factors	Mean	Deviation
Administrative Constraint	2.78	0.72
Administrative Responsibility	2.45	0.66
Interpersonal Relations	2.39	0.67
Intrapersonal Conflict	2.29	0.62
Role Expectations	2.10	0.66

responsibility" factor revealed both junior high and high school vice-principals perceived less stress from this factor than did superintendents. However, other hoc analyses did not identify specific differences between administrative positions for the "administrative constraints," "interpersonal relations," and "intrapersonal conflict" factors; meaning the significant F-ratio may have resulted from a combination of positions rather than any two.

To facilitate reporting the association between administrative position and individual stressors, only the high stressors are reported here--"high" is defined as the top 20 percent of the 35 items, or seven top stressors. Reported in Table 4 are the mean scores and analysis of

Table 2

Mean Scores of Individual Stressors

Factor	Item	Mean	S.D.	Rank
Cons.	Complying with state, federal, and organizational rules and policies	3.34	1.29	1
Cons.	Feeling that meetings take up too much time	3.10	1.22	2
Cons.	Trying to complete reports and other paper work on time	2.99	1.20	3
Resp.	Trying to gain public approval and/or financial support for school programs	2.97	1.20	4
Inter.	Trying to resolve parent/school conflicts	2.82	1.14	5
Resp.	Evaluating staff members' performance	2.79	1.15	6
Intra.	Having to make decisions that affect the lives of individual people that I know (colleagues, staff members, students, etc.)	2.77	1.11	7
Cons.	Feeling that I have too heavy a work load, one that I cannot possibly finish during the normal work day	2.72	1.32	8
Intra.	Imposing excessively high expectations on myself	2.70	1.20	9

Where: Cons. = Administrative Constraints
Resp. = Administrative Responsibility
Inter.= Interpersonal Relations
Intra. = Intrapersonal Conflict
Role = Role Expectation

Table 2

Factor	Item	Mean	S.D.	Rank
Cons.	Being interrupted frequently by telephone calls	2.67	1.06	10
Role	Feeling I have to participate in school activities outside of the normal working hours at the expense of my personal time	2.67	1.25	11
Inter.	Handling student discipline problems	2.58	1.19	12
Intra.	Feeling that the progress on my job is not what it should or could be	2.51	1.13	13
Inter.	Feeling staff members don't understand my goals and expectations	2.44	1.02	14
Inter.	Trying to resolve differences between/ among staff members	2.43	1.05	15
Rest.	Being involved in the collective bargaining process	2.39	1.29	16
Cons.	Writing memos, letters and other communications	2.37	1.11	17
Resp.	Administering the negotiated contract (grievances, interpretation, etc.)	2.36	1.09	18
Resp.	Supervising and coordinating the tasks of many people	2.35	1.08	19

Table 3

Factor	Item	Mean	S.D.	Rank
Inter.	Trying to resolve differences between/ among students	2.33	1.11	20
Role	Thinking that I will not be able to satisfy the conflicting demands of those who have authority over me	2.30	1.18	21
Resp.	Preparing and allocating budget resources	2.30	1.08	2.
Cons.	Having my work frequently interrupted by staff members who want to talk	2.28	1.09	23
Intra.	Knowing I can't get information needed to carry out my job properly	2.23	1.12	24
Role	Feeling pressure for better job performance over and above what I think is reasonable	2.23	1.14	24
Inter.	Trying to influence my immediate supervisor's actions and decisions that affect me	2.22	1.11	26
Role	Not knowing what my supervisor thinks of me, or how he/she evaluates my performance	2.20	1.21	27
Intra.	Feeling that I have too little authority to carry out responsibilities assigned to me	2.10	1.21	28

Table 2

Factor	Item	Mean	S.D.	Rank
Resp.	Speaking in front of groups	2.04	1.13	29
Role	Being unclear on just what the scope and responsibilities of my job are	2.02	1.07	30
Intra.	Attempting to meet social expectations (housing, clubs, friends, etc.)	1.97	1.08	3
Inter.	Trying to resolve differences with my superiors	1.97	1.11	31
Role	Feeling that I have too much responsibility delegated to me by my supervisor	1.88	1.05	33
Intra.	Feeling that I am not fully qualified to handle my job	1.71	0.92	34
Role	Feeling not enough is expected of me by my superiors	1.42	0.78	35

TABLE 3

Analysis of Variance of Stress Factors by Administrative Position

Position	FACTOR: Administrative Constraints	Administrative Responsibility	Interpersonal Relations	Interpersonal Conflict	Role Expectation
Superintendent	2.82	2.64	2.18	2.34	2.01
Superintendent/Principal	3.01	2.50	2.42	2.17	3.04
Assistant Superintendent	2.77	2.45	2.26	2.27	2.12
Central Office	2.75	2.31	2.18	2.29	2.04
High School Principal	2.92	2.56	2.50	2.39	2.18
High School Vice-Principal	2.70	2.21	2.52	2.31	2.21
Junior High Principal	2.91	2.58	2.56	2.31	2.10
Junior High Vice-Principal	2.62	2.18	2.51	2.13	2.09
Elementary Principal	2.73	2.59	2.42	2.22	2.08
F-Ratio	2.11*	6.24***	4.81***	2.11*	1.13

*p<.05
**p<.01
***p<.001

variance of top stressors by administrative position. As indicated from the F-ratios, five of the top seven stressors were significant beyond the .001 level except "meetings" and "completing paperwork."

Post hoc analysis revealed significantly different between individual administrative positions on three stressors: (1) superintendents and assistant superintendents perceived more stress from "complying with rules and policies" than all other groups; (2) junior high vice-principals perceived significantly more stress from "trying to resolve parent/school conflicts" than did the assistant superintendent or the central office staff; and (3) junior high principals perceived more stress from "evaluating staff members" than high school vice-principals, assistant superintendents and central office staff. While a significant difference was shown among school administrators with respect to "gaining public approval" and "making decisions affecting the lives of others," post hoc analysis failed to reveal significant differences between individual positions.

Stress and Physical Health

Previous researchers have shown that the level of perceived stress is strongly associated with one's physical health (Russek and Zohman, 1958; Kornhauses, 1965; Wardell, Hyman and Hahnson, 1970; French and Caplan, 1973, Cooper and Payne, 1978). The relationship between the administrators' self-reported general physical health and the five factors of stress and top seven stressors is examined in Table 5. Each factor and individual stressor is strongly and significantly related with reports of poorer physical health.

In addition to indicating the state of their current physical health, administrators were also asked to identify what percentage of their

TABLE 4

Analysis of Variance of Top Stressors
by Administrative Position

Position	Stressors						
	1. Complying with rules	2. Meetings	3. Paperwork	4. Gaining Support	5. School Conflict	6. Evaluating Performance	7. Making Decisions
Superintendent	4.03	2.92	3.11	3.39	2.50	2.71	2.91
Superintendent/Principal	4.17	2.78	3.41	3.24	2.80	2.95	2.54
Assistant Superintendent	3.60	3.18	2.80	3.37	2.45	2.43	2.54
Central Office	3.30	3.17	2.97	2.98	2.34	2.11	2.38
High School Principal	3.37	3.31	3.07	3.18	3.10	3.16	2.99
High School Vice-Principal	2.96	3.11	2.69	2.67	2.87	2.51	2.82
Junior High Principal	3.51	3.23	3.02	2.80	3.14	3.28	2.99
Junior High Vice-Principal	2.92	2.77	2.88	2.63	3.24	2.57	2.58
Elementary Principal	3.28	3.14	3.02	2.92	2.84	2.95	2.80
F-Ratio	9.51***	1.78	1.81	4.64***	5.97***	9.98***	3.35***

***p<.001

total life stress results from work. More than 60% reported that at least 70% of their total life stress resulted from their jobs. Given the fairly high percentage of total life stress attributed to work, we would expect stress arising from the performance of one's job to have a significant impact on one's physical health.

Although not presently reported, significant differences were found on some stressors when compared by age, years in administration, years in present position, sex and size of school. Differences did not occur nearly as frequently among these variables as they did when compared by administrative position and current physical health status.

DISCUSSION

An analysis of the stress factors clearly showed that the "administrative constraints" factor was most bothersome to school administrators. Contained within this factor were five of the top ten stressors. These included "complying with state, federal and organizational rules and policies;" "trying to complete reports and other paperwork on time;" "feeling that meetings take up too much time;" "feeling that I have too heavy a work load, one that I cannot possibly finish during the normal day," and "being interrupted frequently by telephone calls."

The other high stressors were well distributed throughout the remaining four factors. "Administrative responsibility" factor contained two of the top ten stressors, "trying to gain public approval and/or financial support for school programs" (ranked fourth), and "evaluating staff members" (ranked sixth). "Interpersonal relations" factor had only one of the top stressors, "trying to resolve parent/school conflicts"

Table 5(a)

Analysis of Variance of Stress Factors by Health Status

Health Status	Administrative Constraints	Administrative Responsibility	Interpersonal Relations	Intrapersonal Conflict	Role Expectation
Excellent	2.64	2.29	2.26	2.13	1.97
Good	2.81	2.49	2.43	2.34	2.15
Average	2.99	2.64	2.52	2.45	2.23
Fair	3.04	2.60	2.67	2.59	2.53
Poor	2.43	1.86	1.68	2.27	1.69
F-Ratio	9.76*	12.41*	8.45*	13.75*	10.67*

***p < .001

Table 5 (b)

Analysis of Variance of Top Stressors by Health Status

Health Status	1. Rules & Regulations	2. Meetings	3. Paperwork	4. Gaining Support	5. School Conflicts	6. Evaluating Performance	7. Making Decisions
Excellent	3.20	3.03	2.81	2.81	2.65	2.59	2.59
Good	3.36	3.03	2.99	3.05	2.90	2.89	2.83
Average	3.56	3.32	3.26	3.08	3.02	3.00	3.01
Fair	3.46	3.67	3.56	3.50	2.60	2.63	2.96
Poor	4.50	3.00	4.00	1.50	2.00	4.00	3.00
F-Ratio	3.29**	3.91**	6.98***	5.01***	4.86***	6.50***	6.01***

**p < .01
***p < .001

(ranked fifth). The two highest stressors within the "intrapersonal conflict" factor were "having to make decisions that affect the lives of others," (ranked seventh), and "imposing excessively high expectations on myself" (ranked ninth). This factor also had three of the lowest ranked stressors: "feeling that I am not fully qualified to handle my job" (ranked 34th); "attempting to meet social expectations" (ranked 31st); and "feeling that I have too little authority to carry out my responsibilities assigned to me" (ranked 28th).

None of the top stressors were included in the "role expectations" factor. The highest individual stressor in this factor was "feeling I have to participate in school activities outside the normal working hours at the expense of my personal time" (ranked 11th). However, four of the lowest ranked stressors were included in this factor: "feeling not enough is expected of me by superiors" (ranked 35th); "feeling that I have too much responsibility delegated to me by my superiors" (ranked 33rd); "being unclear on just what the scope and responsibilities of my job are" (ranked 30th), and "not knowing what my supervisor thinks of me or how he/she evaluates my performance" (ranked 27th). In general, many of the items suggested by Kahn (1970) and French and Caplan (1970) as factors in job-related tension were major stressors within the work lives of school administrators.

Stress and Administrative Position

In examining level of position and its relationship to each stress factor, several observations can be made. Generally, while all but the "role expectations" factor were significant when associated with administrative position, no clear trends were established except in the "administrative responsibility" factor. As would be expected the vice-principals in

high school and junior high schools felt less stress from administrative responsibilities than did superintendents.

When comparing mean scores in every factor except "administrative responsibility" secondary administrators scored higher. Although no clear explanation for this exception was evident, this trend supports the popular belief that secondary administration is more stressful than elementary administration. More severe discipline problems, a longer work week due to extensive activity programs, and more of a diversified relationship among staff members may explain the difference.

Also by comparing mean scores, principals and vice-principals clearly perceived greater stress from the "interpersonal relations" factor than did superintendents, assistant superintendents or other central office staff. Apparently building level administrators were more involved in relations with students, parents and staff members than were superintendents and their staffs. The least variation in mean scores came from the "role expectations" factor.

Examination of the individual stressors by administrative position provided some insight into specific stress perceived by some administrators. While five of the top seven stressors were significant when compared by administrative position, only three post hoc analyses showed specific differences between positions. The first two of these are logical and plausible since one would expect superintendents and assistant superintendents to be more troubled by the rules and regulations than other administrators because they have primary responsibility to uphold the law and policies of the school system. Also, job requirements would dictate that vice-principals probably would be more involved in conflict

Table 6

Rank and Mean Scores of Top Stressors
by Administrative Position

	A	Central Office			High School		Junior High		Elemen.
STRESS TRAPS	All Administrators	Superintendent	Assistant Superintendent	Central Office Staff	Senior High Principal	Senior High Vice Principal	Junior High Principal	Junior High Vice Principal	Elementary Principal
Complying with rules & regulations	1 (3.34)	1 (4.03)	1 (3.60)	1 (3.30)	1 (3.37)	3 (2.97)	1 (3.51)	3 (2.92)	1 (3.26)
Attending meetings	2 (3.10)	5 (2.92)	3 (3.18)	2 (3.17)	2 (3.31)	2 (3.11)	2 (3.23)	7 (2.77)	2 (3.14)
Completing paper work	3 (2.99)	4 (3.11)	5 (2.80)	4 (2.97)	6 (3.07)	10 (2.69)	5 (3.02)	5 (2.88)	3 (3.02)
Gaining public approval	4 (2.97)	2 (3.39)	2 (3.38)	3 (2.93)	3 (3.18)	11 (2.67)	10 (2.80)	8 (2.63)	5 (2.92)
Resolving parent conflicts	5 (2.82)	14 (2.50)	14 (2.45)	14 (2.37)	5 (3.10)	5 (2.87)	4 (3.14)	1 (3.24)	6 (2.84)
Evaluating staff's performance	6 (2.79)	8 (2.71)	15 (2.44)	25 (2.10)	4 (3.16)	13 (2.51)	3 (3.23)	10 (2.57)	4 (2.95)
Affecting lives of people	7 (2.77)	6 (2.91)	11 (2.54)	12 (2.38)	8 (2.99)	6 (2.82)	6 (2.99)	9 (2.58)	7 (2.80)
Too heavy work load	8 (2.72)	8 (2.71)	7 (2.68)	7 (2.72)	10 (2.87)	8 (2.71)	9 (2.81)	12 (2.53)	10 (2.56)
Expectations on self	9 (2.70)	7 (2.73)	7 (2.68)	6 (2.73)	11 (2.80)	9 (2.70)	12 (2.69)	11 (2.54)	8 (2.61)
Telephone interruptions	10 (2.67)	15 (2.49)	6 (2.72)	5 (2.74)	9 (2.89)	7 (2.73)	10 (2.80)	13 (2.48)	9 (2.58)
Outside school activities	11 (2.67)	12 (2.56)	9 (2.63)	23 (2.20)	7 (3.00)	1 (3.23)	3 (2.86)	4 (2.89)	12 (2.52)
Student discipline	12 (2.58)	26 (2.01)	32 (1.75)	31 (1.73)	15 (2.56)	4 (2.96)	7 (2.97)	2 (3.05)	11 (2.54)
Number of Administrators in Study	1156	110	50	115	123	120	88	66	354

resolution problems between the parent and school than the central staff. However, the third association where junior high principals perceive more stress from evaluating staff members than other administrators is not as easily explained since others probably have equal responsibility for evaluating their respective staff members.

Rather than looking for differences in stressors among administrators, a search for similarities may be revealing. As part of this investigation Table 6 summarizes and extends Table 4 by ranking the mean scores of the top stressors for each administrative position. The following paragraphs explore the stressors the management team shares with one another. Note that while the mean scores may vary the rank may be the same for several administrative groups--thus revealing stressors the management team has in common.

1. Complying With Rules. Nearly all school administrators agreed the number one source of stress was compliance with state, federal and organizational rules and policies. Only junior high vice-principals and senior high vice-principals perceived others' stressors as being more bothersome. However, the degree to which compliance was stressful varied significantly. Superintendents and superintendent/principals were among the positions indicating the greatest stress.
2. Attending meetings. Almost the entire management team concurred that the second most bothersome activity was the overburdensome number of meetings. This was especially true for the central office staff and elementary and secondary school administrators. Although still an irritant, superintendents ranked meetings only fifth--probably because they are in charge of them and the degree to which one is in control significantly reduces its impact.

3. Completing reports on time. Superintendents appeared to be most troubled with completing paper work and written communications. But apparently all levels of administration fall into this stress trap, suggesting that reports are a perennial problem throughout school administration.

4. Gaining public support. It was not surprising to find that gaining public approval and/or financial support for school programs caused great concern. Given that the major responsibility for gaining support lies primarily with the superintendent's office, it is logical that more tension was generated there than at the building level.

5. Resolving parent-school conflicts. Secondary school administrators found resolving parent-school conflicts to be stressful (ranked third) while the central administration seemed less affected by this stressor, presumably because they have minimum contact with them. However, it was rather astounding that superintendents perceived this as less troublesome; they generally interact with parents in many conflict situations.

6. Evaluating staff. Principals at all levels were bothered more by evaluation than other groups. Nevertheless, it averaged sixth for the team since evaluation is not an easy task for any administrator to perform.

7. Decisions affecting others. Those administrators with evaluation and overall supervisory responsibility--primarily superintendents and principals--were most troubled by having to make decisions affecting the lives of their colleagues, staff members, and students.

8. Heavy work load. The members of the management team ranked "too heavy a work load to finish during the normal day" anywhere from seventh to twelfth. While not the primary sources of stress, overwork still produces excessive frustrations for everyone.

9. High self-expectations. Not ranked consistently as one of the most significant pressures, "imposing excessively high self-expectations" was sixth and seventh highest for central staff, assistant superintendents, and superintendents. Building principals seemed to be less bothered by self-expectations--possibly because jobs are more definable at the building level than the central office.

10. Telephone interruptions. Central office staff and secondary school administrators were more bothered by frequent telephone interruptions than other administrators.

11. Participating in school activities outside normal working hours. High school administrators were annoyed most by this stressor. It was the high school vice-principal's number one ranked stressor, probably due to the fact that most high schools offer their extra-curricular programs at night and on the weekends, thus encroaching on the vice-principal's time.

12. Handling student discipline. As might be expected, the differences among administrators in the stress encountered by handling student discipline directly related to the amount of contact they had with students. High school vice-principals and junior high school principals and vice-principals were bothered most by student conflicts.

In summary, rank-order analysis reveals that all members of the management team share many common stressors. What plagues superintendents, therefore, similarly plagues other members of their teams, from the central office to the schools. Because they share common problems, the entire team could work together to help each other reduce their barriers to effective school management.

Stress and Physical Health

Of particular interest is the relationship between stress factors and the respondent administrators' health. In each of the five factors and all seven stressors an increase in stress was associated with poor self-reported physical health. This clearly established a trend indicating health status may be closely correlated with the level of perceived stress resulting from each factor.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, the following conclusions and recommendations are presented.

1. Five of the top ten stressors appeared in the administrative constraints factor. Four of the stressors perceived by the administrators to be the most bothersome were related to the management of activities and their relationship to time.

It has been suggested that these are stressors over which the administrator has little control. At first glance this appears to be true, however, upon further investigation administrators may have more control over their most bothersome stressors.

Since time is finite, emphasis must be placed on its more effective use. Through time management training, not only can individual and organization time be increased, but greater success may reduce the stress produced by time pressures. Considerable training is now available in time and activity management. Presently, it appears that most of the emphasis on time management has been in the inservice training period and not in administrative preparation programs. It is recommended that such training be included in certification or preservice programs so the prospective administrators may take advantage of this training as early as possible in their administrative career.

2. Complying with rules and policies was consistently perceived as a high stressor among all levels of administration. The implications for administrative training programs cannot be as clearly defined as in other stressor areas. A greater emphasis, however, upon compliance procedures and guidelines and legal training may increase understanding and reduce some of the anxiety resulting from these requirements. Particular attention should be paid to the administrators of those districts under a special compliance responsibility.

Due to a continual change in the emphasis of governmental policy, continued revision is necessary for effective training. Work sessions, conferences and classes provided as part of the professional inservice program of the administrative associations or colleges may be more appropriate than preservice classes. It is also recommended that continued emphasis be placed on the positive approach to compliance as a method to reduce stress.

3. Interpersonal relations continues to be a high source of perceived stress, particularly as they relate to solving conflicts with students, staff

and parents and to obtaining community support. Good working relations with people closely relates to organizational effectiveness and individual health.

A continued emphasis is recommended on interpersonal communication skills in both pre and inservice programs. Additional emphasis needs to be given to conflict resolution and community relations at both levels of program instruction. It is further recommended that both areas become required training during the preservice (certification) program.

Increased emphasis should be given to creatively designing new alternatives to community relation techniques. Continued research on the causes of public unrest and distrust of educators needs study. More than the symptoms must be treated to improve the environment in which the administrators are working.

4. The data indicated an inverse relationship between stress and self-reported health status of administrators. It is recognized that the limitations of the perceptions of both variables may temper the findings, however the seriousness of these implications cannot be dismissed.

Researchers continue to discover more precisely how stress affects people's health. This search will undoubtedly ensue for years ahead as it has in the past. However, future research should attempt to identify clearly the interrelationships between outside stimuli and bodily reactions.

The present research study centered on the occupational stimuli of the school administrator's work environment. Further research, including physiological and pyschological studies, needs to be done. It is suggested the investigators consider field observations and ethnographic studies to more accurately and objectively view the factors involved in the determination of administrative stress. Continued efforts must be made to search beyond the correlation studies to causal relationships.

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